

CAROL ANN GRANT

**HON. ED PERLMUTTER**

OF COLORADO

IN THE HOUSE OF REPRESENTATIVES

*Monday, April 25, 2016*

Mr. PERLMUTTER. Mr. Speaker, I rise today to recognize and applaud Carol Ann Grant for receiving the Adams County Mayors and Commissioners Youth Award.

Carol Ann Grant is an 8th grader at Bennett Middle School and received this award because her determination and hard work have allowed her to overcome adversities.

The dedication demonstrated by Carol Ann Grant is exemplary of the type of achievement that can be attained with hard work and perseverance. It is essential students at all levels strive to make the most of their education and develop a work ethic which will guide them for the rest of their lives.

I extend my deepest congratulations to Carol Ann Grant for winning the Adams County Mayors and Commissioners Youth Award. I have no doubt she will exhibit the same dedication and character in all of her future accomplishments.

IN RECOGNITION OF DR. CHARLES ELACHI, DIRECTOR OF THE JET PROPULSION LABORATORY

**HON. JOHN ABNEY CULBERSON**

OF TEXAS

IN THE HOUSE OF REPRESENTATIVES

*Monday, April 25, 2016*

Mr. CULBERSON. Mr. Speaker, I rise today to honor my good friend Dr. Charles Elachi, the Director of the Jet Propulsion Laboratory (JPL), who plans to retire this June after 45 years of service to the people of the United States of America.

Dr. Elachi's journey to become the Director of JPL is a source of inspiration and encouragement to every young person in America who dreams of making great discoveries or changing the world around them. Charles Elachi's life is a true Horatio Alger story. As Dr. Elachi wrote recently in an essay for the Smithsonian, "How did a boy from an ordinary, middle-class family in a little Lebanese village come so far? The answer is deeply connected with what I believed as a child and I still believe today: The United States is a land of freedom and opportunity, where anything is possible, and where dreams can and do come true."

Growing up in the small Lebanese town of Rayak, Charles remembers meeting "quite a few American visitors. Over and over again," he said, "I was struck by their open, positive attitude toward life, their attitude that anything is possible, no holds barred, regardless of family background, religion or color." As a boy, he loved watching the stars at night, and he says watching those stars helped inspire him to study hard at school. He was so successful at his studies that he distinguished himself as Lebanon's top science student, an honor which enabled him to attend any university he chose.

He first earned a degree in physics at the University of Grenoble, France, and then earned a degree in engineering at the Polytechnic Institute. When it was time to decide

on graduate school, those early positive memories of optimistic fearless Americans inspired him to go to California, where he earned admission to the California Institute of Technology. He fell in love with southern California, and earned a master's degree and a doctorate in electrical sciences from Caltech, a master's degree in geology from UCLA, and a master's degree in business administration from the University of Southern California.

His lifelong dreams about exploring the stars and his exceptional work in college brought him to the Jet Propulsion Laboratory in 1970. He first worked on Earth observing missions, and then moved on to planetary exploration and astrophysics. His scientific and engineering gifts and his natural talent as a leader led NASA to select Charles as the Science Team Leader on the Space Shuttle's Imaging Radar. JPL recognized his unique skills and assigned him to be a key part of the Magellan Imaging Radar which was so essential to visualize the surface of Venus through its permanent and total cloud cover for the first time.

NASA and JPL were so impressed with his work that he was then chosen to lead the radar science team for the extraordinarily successful Cassini-Huygens mission to Saturn. Once again, his skill with orbital imaging radar systems proved essential in visualizing the surface of an alien world otherwise forever hidden beneath a permanent worldwide cloak of clouds—Titan. Charles' work as the leader of this radar team was a vital part of selecting the site for humanity's first successful landing on an alien world beyond the moon and Mars when the Huygens spacecraft landed on Titan in January, 2005. The Cassini orbiter continues to thrive far beyond its predicted lifespan and return groundbreaking scientific discoveries about Saturn, its ring system and its immense family of moons.

Charles Elachi was appointed as director of the Jet Propulsion Laboratory in 2001, and under his visionary leadership, JPL scientists and engineers have discovered: conclusive evidence of water ice and long lasting rivers and lakes on Mars; created history's most detailed gravity field and ice maps of Earth; returned history's first samples and close up images of a comet; landed three complex and highly successful spacecraft on Mars; blasted the first artificial crater in a comet to learn what comets are truly made of; landed the first spacecraft on Titan and sampled its surface and atmosphere; discovered lakes and seas of liquid methane on Titan using Charles' imaging radar; created the first deep space telescopes to see the universe in ultraviolet and infrared; returned our first true close up images of dwarf planets and asteroids; created the most detailed map ever made of the Moon; discovered millions of black holes; discovered the first Earth like exoplanet in the habitable zone of another star; discovered conclusive evidence for immeasurable millions of exoplanets in our galaxy; set a still growing record for driving a spacecraft across the surface of another world with the unstoppable Opportunity lander on Mars; discovered the most luminous galaxy in the universe; discovered conclusive evidence for liquid water today on the surface of Mars; discovered immense geysers of frozen water erupting from a worldwide ocean beneath the frozen surface of Saturn's moon Enceladus; and laid the groundwork for what most planetary scientists

predict could be the first discovery of life beyond Earth in the vast oceans of Europa.

These discoveries will be remembered throughout human history. "Only the United States could do this!," as Charles vividly remembers a foreign visitor saying on the night a rocket sky crane gently landed the Mars Science Lab on the surface of Mars in August of 2012. Charles was reminded that night of another day he felt the same sort of immense pride in his nation when he took the oath to become a United States citizen in August of 1979. "In this nation of immigrants," Charles wrote for the Smithsonian, "especially in science and engineering, where people try new things and solve problems, they don't ask where you're from. Instead, they ask who is the best person to help overcome a challenge."

"In other countries, you just don't find this merging of cultures, this melting pot. I think diversity truly enriches our society and makes the United States more intellectually and economically powerful. People from different backgrounds bring different ideas and thought processes. The best ideas rise to the top. I see that happen at NASA and JPL all the time. How else do you land a rover on a planet no human has ever visited, or design a robot to capture an asteroid?"

Charles tells us that "I believe this uniquely American spirit of optimism, the sense that anything is possible for anyone, is a key reason our nation is the world leader in space exploration. . . . That wonderful, very American spirit of opening doors, of pushing the frontier, of pursuing the seemingly impossible—that's what exploration is all about. When the United States landed on the moon and Neil Armstrong took that one "small step" on the surface, when we landed a rover on Mars, when we deliberately collided with a comet to study its interior, all those milestones made people here feel deep pride as Americans. But I also believe and hope that they made people around the globe feel deep pride as humans, pride in all the positive and amazing things we can accomplish when we work together."

Charles Elachi embodies everything that has made America the most prosperous and powerful and freest nation in the history of the world. His life and the scientific discoveries he has left us all as his legacy will inspire us and our children and grandchildren and their descendants for all time. Charles Elachi and his extraordinary team of scientists and engineers have made our lives as Americans and as members of the human race far, far richer because he and his team have dared and succeeded in achieving mighty things.

All Americans owe this wonderful good man an immeasurable debt of gratitude. We will reap the harvest of his visionary leadership for many, many generations to come. It is my great privilege to be his friend and to stand here today, on behalf of the people of Texas I represent who love NASA and its mission, and on behalf of the United States Congress, to thank Charles Elachi for his devoted service to America, to NASA, to JPL, to science and for helping lead humanity in our greatest era of discovery. May God always bless you and you and your family, Charles.